

What is Claimed is:

1. A peptide useful in protecting human cells from oxidative damage, wherein:
 - a) said peptide is a total of 10 to 44 amino acids in length;
 - b) said peptide comprises the 10 amino acid sequence: REWEEAERQA (SEQ ID NO:1);
 - c) said peptide may include 1 to 14 additional amino acids immediately C-terminal to SEQ ID NO: 1, said additional C-terminal amino acids being in the order of the sequence: KNLPKADKKAVIQH (SEQ ID NO: 2); and
 - d) said peptide may include 1 to 20 additional amino acids immediately N-terminal to SEQ ID NO:1, said additional N-terminal amino acids being in the order of the sequence: FQKAKERLEAKHRERMSQVM (SEQ ID NO: 3).
2. The peptide of claim 1, wherein said peptide is 10 amino acids in length and has the sequence: REWEEAERQA (SEQ ID NO: 1).
3. The peptide of claim 1, wherein said peptide is 13 amino acids in length and has the sequence: REWEEAERQAKNL (SEQ ID NO: 4).
4. The peptide of claim 1, wherein said peptide is 24 amino acids in length and has the sequence: REWEEAERQAKNLPKADKKAVIQH (SEQ ID NO: 5).
5. The peptide of claim 1, wherein said peptide is 30 amino acids in length and has the sequence: FQKAKERLEAKHRERMSQVMREWEEAERQA (SEQ ID NO: 6).
6. A peptide useful in protecting cells from oxidative damage, wherein said peptide is 23 amino acids in length and has the sequence: DGDEVVEEAEPYEEATERTTTSA (SEQ ID NO: 7).
7. The peptide of any one of claims 1-6, wherein said peptide is substantially pure.
8. An antibody made by a process comprising the step of injecting a preparation of the peptide of any one of claims 1-6 into an animal capable of producing said antibody.

9. A substantially pure polynucleotide consisting of a nucleotide sequence encoding the peptide of any one of claims 1-6.
10. A vector for expressing a peptide, comprising a coding region consisting of the polynucleotide of claim 9, wherein said coding region is operably linked to a promoter.
11. A host cell transformed with the vector of claim 10.
12. A pharmaceutical composition in unit dose form comprising the peptide of any one of claims 1-6.
13. A method of reducing oxidation-related damage in a patient suffering from a stroke, heart attack or spinal injury, comprising: administering to said patient a therapeutically effective amount of the pharmaceutical composition of claim 12.
14. A method of preventing stress-related cellular injury in a patient undergoing surgery, comprising administering to said patient a therapeutically effective amount of the pharmaceutical composition of claim 12.
15. A method of protecting cells from oxidation-related damage, comprising exposing said cells to an effective amount of the peptide of any one of claims 1-6.
16. The method of claim 15, wherein said cells are selected from the group consisting of: vascular smooth muscle cells; vascular endothelial cells; and neuronal cells.